

THE CATALYST

SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

THIS MONTH'S MEETING: Thursday February 8 @ 7:00 PM, Jennings Environmental Education Center, Pizza and Pop will be provided!! 1/11/01 meeting attendance: L. Ansell, F. Brenner, S. Busler, C. Cooper, T. Danehy, C. Denholm, M. Dunn, D. Johnson, V. Kefeli, W. Taylor, and B. Beran.

YEAR 2000 IN REVIEW - WHAT A YEAR IT WAS!!!!

Abandoned Mine Drainage Projects Completed

Site	Flow (avg. gpm)	Tons of Pollutant Removed Per Year Acidity	Metals
De Sale Phase I	34	25	6
De Sale Phase II	34	21	3
Goff Station (ST38 & ST39)	164	34	4
Total	232	80	13

Reclamation Projects Completed

- De Sale Restoration Area Phase I (June) - 8 Acres of Abandoned Minelands Restored
- Goff Station Gob Pile Removal (June) - Over 60,000 cubic yards of coal refuse removed and neutralized

Conferences Attended (Presentations Given)

- \$ Society for Mining, Metallurgy, and Exploration Annual Meeting - Salt Lake City, UT, 2/28-3/1 (Receive award)
- \$ Amer. Inst. of Mining, Metallurgical, and Petroleum Engineers Annual Mtg. - Nashville, TN, 3/12-3/14 (Receive award)
- \$ West Virginia Surface Mine Drainage Task Force Symposium Annual Meeting - Morgantown, WV, 4/4-4/5 (Poster)
- \$ American Society for Surface Mining and Reclamation Annual Meeting - Tampa, FL, 6/11-6/15 (2 professional papers - 1 by Darcy Peart at the tender age of 18!!; 3 posters - related to work completed at Jennings Env. Ed. Center)
- \$ Harrisville Community Days - Harrisville, PA, 7/1 (Poster Presentation)
- \$ International Diatom Symposium - Athens, Greece (Presentation)
- \$ PA Watershed Conference: Restoration and Protection - State College, PA 10/12-10/13 (Oral /Poster Presentation)
- \$ 2nd Annual Southwest Watershed Workshop - University of Pittsburgh, Greensburg, PA, 10/21 (Presentation given)
- \$ Mining and Reclamation Advisory Board - Harrisburg, PA, 10/26 (Presentation)
- \$ 8th Annual Monastery Run Project Symposium - Saint Vincent College, Latrobe, PA, 11/16

Public Outreach/Volunteer Activities

- \$ Scrubgrass Power Plant Reclamation Site Tour - Numerous sites within watershed, 3/30
- \$ Slippery Rock Watershed Coalition Annual Symposium - Jennings Env. Ed. Center, Slippery Rock, PA, 4/6 -4/7
- \$ Slippery Rock Watershed Coalition Annual Get-Together - Epiphany Catholic Church, Boyers, PA, 4/12
- \$ Earth Day Tree Planting - Quality Aggregates Princeton Limestone Quarry, Princeton, PA, 4/29
- \$ Testimony to House Subcommittee on Energy and Mineral Resources by Margaret H. Dunn - Washington, D.C., 5/17
- \$ De Sale Restoration Area - Phase I Wetland Planting - De Sale, PA, 6/3
- \$ Site Visit of De Sale Phase I & II, Goff Station, and Jennings - Visited by Robert Narin, PhD., Oklahoma Univ., 8/15
- \$ Field Tour-De Sale Phase I & II, Goff Station, & Jennings - USGS, Australian Professors/Researchers & others attended, 8/24
- \$ Local Television Interview - De Sale Restoration Area - Phase I, Aired on local cable channel 10
- \$ De Sale Restoration Area - Phase II Wetland Planting - De Sale, PA, 10/2
- \$ Science Presentation - Evangel Heights Christian Academy, Science classes learn first hand about impacts of AMD and current restoration efforts, Sarver, PA, 10/5
- \$ Butler County Annual Farm Tour - Approx. 400 people visited De Sale Restoration Site, De Sale, PA, 10/7
- \$ Girl Scout Wetland Planting - Goff Station Restoration Project - Goff Station, PA, 10/20-10/21
- \$ Stream Releaf Tour - De Sale and Goff Station Restoration Areas, 11/9

Recognition Received

- \$ Army Corps Recognize PA DEP, Knox District Mining Office - AInteragency cooperation, partnership, and environmental contribution@ (For their work in Elk County, PA)
- \$ Environmental Conservation Distinguished Service Award - Margaret H. Dunn, PG - Presented by American Institute of Mining, Metallurgical and Petroleum Engineers
- \$ Volunteer Group Award - Jennings Env. Ed. Center - Presented by Butler County Parks and Recreation Society
- \$ Letter of Congratulations from Tom Ridge, Govenor - Margaret H. Dunn - Presented by Robert C. Dolence, Dept. Secretary for Mineral Resources Management
- \$ TriBeta Competition Recognition of Kim Kosick, Grove City College - Presented by Beta Beta Beta honorary fraternity
- \$ Governors Award for Environmental Excellence - Jennings Env. Ed. Center - Presented on behalf of Governor Tom Ridge by James Seif, Secretary and Robert Barkanic, Deputy Secretary for Pollution, Prevention and Compliance Assistance, PA DEP



Center receives education award

Environmental efforts recognized

By Lawrence Sanata
TRIBUNE-REVIEW

Many consider it a shining star tucked away in the rolling, wooded hills of Butler County. It is the Jennings Environmental Education Center, which last week received a Governor's Award for Environmental Excellence.

The award recognizes the state-operated center in Brady Township for its enterprising efforts in educating people from throughout the world about the impact of acid mine runoff and what can be done to resolve it.

Brady Township

Visitors learn by seeing a polluted stream running from an abandoned coal mine at the center, as well as some of the most advanced methods in the world for treating acid mine runoff, said Margaret Dunn, a Cranberry geologist and environmentalist who was among a handful of people to nominate Jennings for the award.

"This (award) is a great thing. We're just very excited about it," said Dunn, who is involved with a variety of nonprofit environmental organizations that have been active in cleaning acid mine runoff in the county.

Fred Brenner, a professor of biology at Grove City College, said there is no question that Jennings is worthy of recognition. "They've been a major player," in helping understand acid mine runoff and helping clean acid mine runoff in the region, he said.

Many of the acid mine treatment systems that have been studied at Jennings are being used in this country and other countries, the biology professor said.

In addition, the center's involvement with elementary and secondary students, as well as college students, has helped more people to understand the environmental dangers caused by abandoned mines, he said.

Will Taylor, an environmental educator at the center, said a public-private partnership born in 1989 at Jennings has led to miles of polluted streams and acres of polluted soil being restored in Butler County. "I think what makes us unique is that we were one of the first people to do this," he said.

Companies such as Amerikohl Mining in Butler and Quality Aggregates in Neville Island have played an essential role in helping address acid mine runoff problems by lending their expertise and equipment, he said.

"I think the people who have been involved in some of the projects had their eyes open to what could be accomplished by working together," Taylor said.

In the beginning, Taylor said, he was skeptical of the effort to reclaim water and land affected by acid mine runoff.

"By 1992, or 1993, I started to get a clue that this is a big deal. If these systems work, this could be incredible. This could be the answer to some pretty major problems that we have," he said.

PLEASE SEE CENTER/N4

JENNINGS RECEIVES GOVERNOR'S AWARD!!!!!!!

Jennings Environmental Education Center received the Governor's Award for Environmental Excellence in the category of Education and Outreach. On behalf of the center, **Will Taylor** and **Dave Johnson** accepted the award. Pictured above are **Will Taylor**, **Tanya Rucosky**, **Dave Johnson**, **Senator Mary Jo White**, **Darcy Peart**, **Cindy Shirley**, **Margaret Dunn**, **Tim Danehy**, and **Shaun Busler**. The following article is from the December 24, 2000 issue of the Pittsburgh Tribune-Review.

Center nets education award for efforts

CENTER FROM/N3

Work at Jennings also inspired the creation of the Slippery Rock Watershed Coalition, which has been instrumental in addressing acid mine runoff problems in the county, he said. The nonprofit group has been awarded hundreds of thousands of dollars in government grants to help restore streams and land, he said.

The coalition estimates that about 4,000 acres, or 25 percent of the headwaters of Slippery Rock Creek, are underlain with abandoned underground coal mines. The headwaters are located in northern Butler County and southern Mercer County, with Slippery Rock Creek running south through Butler County.

Gov. Tom Ridge honored 43 Pennsylvania organizations, individuals and companies from 27 counties for their environmental initiative.

The Governor's Environmental Excellence Award honors organizations, businesses and individuals for positively affecting Pennsylvania's environment. The awards are presented in nine categories: pollu-

tion prevention, energy efficiency/renewable, technology innovation, management systems, technical assistance provider, land use, industrial recycling, recycling and market development and education and outreach.

The Jennings Environmental Education Center was the only winner in Butler County.

Many of the awards, Dunn said, went to businesses that have reduced manufacturing wastes or developed new environmental processes. Jennings is different in educating, researching and cleaning the environment, she said.

The center was presented with the governor's award specifically for its education and outreach efforts. Even before the presentation of the award, Jennings was recognized by the Pennsylvania Department of Conservation and Natural Resources in one of its publications for its work in environmental education and outreach, Dunn said.

Jennings operates essentially "a public laboratory," she said. The passive treatment systems, which have been developed at Jennings,

are on display and constantly are being studied, she said.

National and international environmental experts have visited Jennings to discover some of the methods being used locally to treat acid mine drainage, Dunn said.

Jennings, which is overseen by the Department of Conservation and Natural Resources, is one of 116 state parks within Pennsylvania. It is one of only four environmental education centers in the state and the only one in western Pennsylvania, according to state officials.

Last year, more than 167,000 people visited the center. Among those visitors were students from 260 elementary and secondary schools and 11 colleges and universities, state officials said.

Dunn estimated that about 2,400 miles of streams in Pennsylvania are affected by acid mine runoff. No one government agency will ever be able to restore those streams, she said.

A public-private partnership, like the one developed at Jennings, is the only viable way for streams like this to be reclaimed, she said.

6th Annual Slippery Rock Watershed Coalition Symposium!!!!!!

The 6th Annual Symposium will be held on **Thursday, April 5** and **Friday, April 6** at the Jennings Environmental Education Center. The date for the Get-Together at the Epiphany Church in Boyers, PA is scheduled for **Wednesday May 9**.

THE KIDS CATALYST

SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITIES

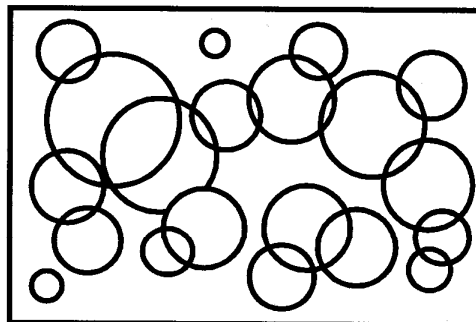
Coal is just one of the natural resources within many watersheds. By using these resources wisely we can help protect our watersheds from being impacted. Learn more about coal and why we use it on the back page. We hope you have fun with the word search below!!!

Thanks to everyone who participated in the coloring contest!!! If you haven't sent your coloring in to us yet, it is not too late!!! Send it to the Slippery Rock Watershed Coalition at 3016 Unionville Road, Cranberry Twp., PA 16066. For more information or hands on learning call us at (724) 776-0161.

Word Search Coal Challenge

What did one penny say to the other? "Together we make cents."

Can you find all of the hidden words? Complete the word search below by finding all of the bolded words from the paragraph on the back page.



r	p	i	c	z	g	g	t	b	c	a	b	w	e	d	q	b	p	i	x
y	r	e	r	b	r	c	x	o	o	r	o	b	z	v	j	v	p	v	o
z	e	a	r	s	s	g	y	h	k	a	g	s	p	l	n	n	e	d	u
z	s	i	o	t	x	k	p	c	e	q	s	p	o	i	l	n	n	o	v
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x	u	c	k	a	t	v	a	c	k	r	e	z	h	o	a	l	s	t	s
r	r	h	z	m	s	v	v	w	a	o	e	m	p	e	a	q	y	l	t
c	e	m	m	s	w	a	m	p	s	n	l	s	e	f	a	l	l	m	o
w	g	a	u	t	o	m	o	b	i	l	e	s	k	x	v	t	v	i	n
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p	w	q	p	z	o	e	l	e	c	t	r	i	c	i	t	y	i	s	j
k	u	y	n	u	m	i	x	o	j	l	t	h	s	y	x	j	a	v	q
d	m	m	j	f	o	q	l	c	n	a	t	u	r	a	l	g	a	s	m
p	z	i	u	b	r	i	d	g	e	s	i	r	r	k	d	g	i	r	t
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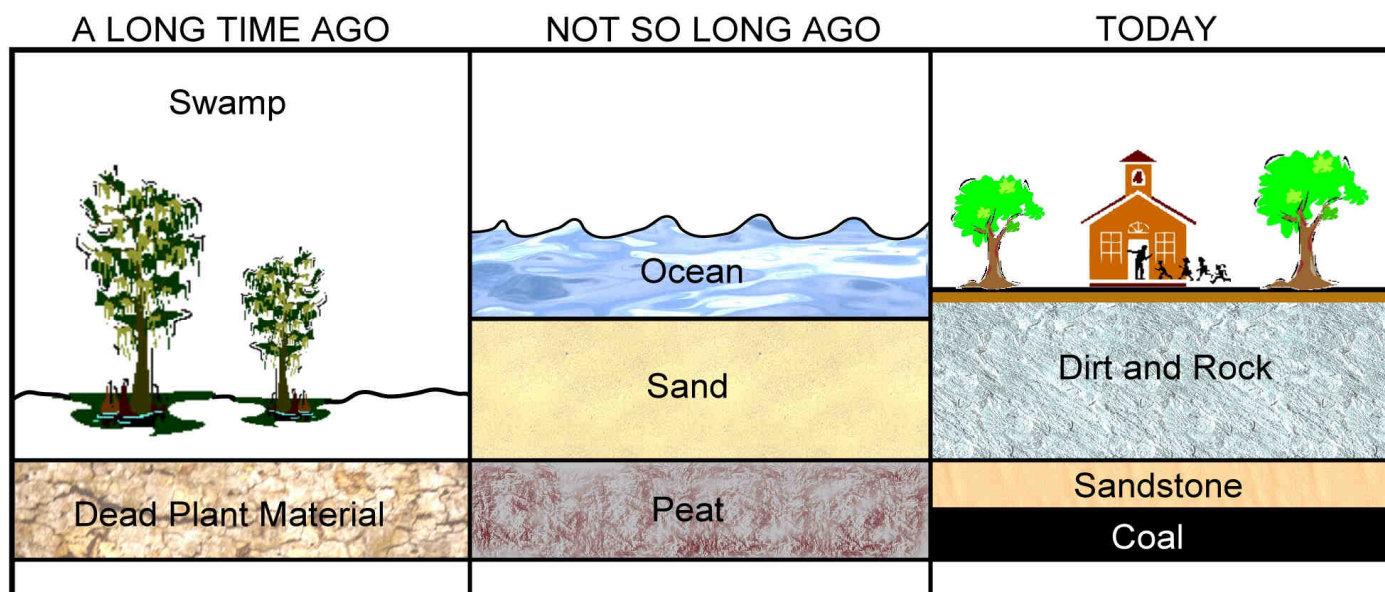


Illustration by: Cliff Denholm and Shaun Busler

How Coal Formed and Why We Use It

Coal, oil, and natural gas are **fossil fuels**. Fossil fuels formed from dead plants and animals that were buried a long time ago beneath **tons** of **rock** and **soil**. The **heat** and **pressure** created by the rock and soil slowly turned the dead plants and animals into these fossil fuels. Coal formed mostly from the dead plants that collected at the bottom of **swamps** and **bogs**. It took about 10 feet of dead plant material to make 1 foot of coal.

Coal is mainly used for heating, making **electricity**, and making **steel**. 60% of the electricity used in **Pennsylvania** is made by burning coal. Coal is burned to make **steam** which turns turbines which makes electricity.

Coal can also be baked in hot furnaces to make **coke**. This coke is used to make **iron** from iron ore which is needed to make steel for **bridges, buildings** and **automobiles**.

The United States mines 1,100,000,000 tons or 1.1 billion tons of coal per year. That is about 1/5 of all the coal mined in the world.

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